

REMARKS

Claims 1-16 are now pending in the application. By this amendment, Claims 1-7 have been amended. The basis for these amendments can be found throughout the specification, claims, and drawings originally filed. No new matter has been added. The preceding amendments and the following remarks are believed to be fully responsive to the outstanding Office Action and are believed to place the application in condition for allowance.

The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained therein.

I. Claim Objections

The Examiner's objection to Claim 7 is acknowledged. Although applicants do not necessarily agree, Claim 7 has been amended to include a "second substrate" in place of a "first substrate" as filed. Applicants respectfully request that the Examiner withdraw the objection.

II. Claim Rejections Under 35 U.S.C. § 102

Claims 1, 2, and 7-14 stand rejected under 35 U.S.C. § 102(b) as being anticipated by JP 56-20927 (JP'927). This rejection is respectfully traversed.

Claim 1 calls for "a sealing member having a conductive material." See Specification at page 34, ln. 25 and page 35, lns. 1-14. The sealing member causes the first terminal to electrically conduct with the second terminal for conduction between the substrates when the conductive material of the sealing member is pressed or crushed

between the first and second substrates. In this manner, the first and second substrate terminals are electrically connected to each other by a sealing member including a conductive material between the first and second portions of the second input terminal.

In contrast, the JP'927 reference discloses that the terminals (7) on the substrate (5) are electrically connected to the terminals (8) on the substrate (1) with the adhesive material (13), not with the member (10). As such, the JP-927 reference does not disclose a first and second substrate terminal electrically connected to each other by a sealing member including a conductive material between the first and second portions of the second input terminal. Therefore, Applicants respectfully submit that the JP'927 reference fails to teach each and every element of the claimed invention and, accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Claims 4-6 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Kobayashi (U.S. Patent No. 5,959,713). This rejection is respectfully traversed.

The Examiner alleges that Kobayashi discloses an LCD apparatus comprising a first substrate 1 having a first terminal 8 for conduction between the substrates located adjacent an edge of the substrate having a first electrode pattern 6 which is electrically connected to the first terminal for conduction between the substrates and which is arranged so as to extend toward an edge opposing the edge to which said first terminal for conduction between substrates is adjacent. The Examiner further alleges that Kobayashi discloses a second substrate 2 having a terminal 12 for input from the outside located adjacent to the edge of the substrate, a second terminal 21 for conduction between the substrates, a second electrode pattern 7, and a driving IC motor 13 mounted on a second substrate. Applicants respectfully assert, however, that

Kobayashi does not disclose a second terminal disposed at a central portion of the first edge and further does not disclose a second electrode pattern flanking the second terminal. As such, Applicants respectfully submit that Kobayashi does not disclose each and every element of the claimed invention.

More particularly, Claim 4 calls for a “second substrate terminal for conduction between substrates extending essentially perpendicular to said first edge and disposed at a central portion of said first edge.” See Specification at page 32, Ins. 6-13 and Figures 2 and 7. That is, the second substrate is disposed at a central portion of the second substrate for interaction with a first substrate terminal, wherein the first substrate terminal is disposed generally at a central point of the first substrate for conduction between the first and second substrates. Kobayashi fails to disclose a centrally located terminal for conduction between the first and second substrates. Rather, Kobayashi discloses a first terminal 8 for conduction between substrates disposed at the outer edges of the first substrate panel 1 including a first and second portion disposed adjacent a first edge, wherein the first and second portions are spaced apart and separated by a central portion of the first substrate 1 (See Figure 3 of Kobayashi).

Furthermore, Kobayashi discloses a second substrate 2 having a second terminal 21 for interaction with the first terminal 8 such that the second terminal 21 includes a first and second portion, whereby the first portion of the first terminal 8 is aligned with the first portion of the second terminal 21 and the second portion of the first terminal 8 is aligned with the second portion of the second terminal 21 (See Figures 3 and 4 of Kobayashi). In this regard, the first and second portions of the second terminal 21 are spaced apart and disposed at opposing outer edges of the second substrate 2,

thereby having a central portion of the second substrate 2 separating the first and second portions of the second terminal 21. As such, Kobayashi discloses a terminal configuration that is different from the claimed invention.

Moreover, Claim 4 further calls for a second electrode pattern having “a first portion flanking one side of said second terminal and a second portion flanking another side of said second terminal.” See Specification at page 16, Ins. 6-16 and Figures 2 and 7. In this manner, the second electrode pattern flanks two sides of the second terminal along the first edge of the second substrate, as best shown in Figures 2 and 7. Kobayashi does not disclose a second electrode pattern flanking a centrally located second terminal conductive with a centrally located first terminal on a first substrate. As such, the present invention is distinguished from Kobayashi.

As Kobayashi does not disclose a centrally located first and second terminal for conduction between a first and second substrate, and further because Kobayashi does not disclose a second electrode pattern flanking a second terminal, Applicants respectfully submit that Kobayashi fails to teach each and every element of the claimed invention. Therefore, reconsideration and withdrawal of the rejection is respectfully requested.

III. Claim Rejections Under 35 U.S.C. § 103

Claims 3, 15, and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over JP'927 in view of Kobayashi (U.S. Patent No. 5,959,713). This rejection is respectfully traversed.

Independent Claims 1 and 7 are believed to be in condition for allowance in light of the remarks contained above. Because Claims 3, 15, and 16 depend from independent Claims 1 and 7, dependant Claims 3, 15, and 16 should similarly be in a condition for allowance for at least the same reasons. Therefore, reconsideration and withdrawal of the rejection is respectfully requested.

V. Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding office action, and as such, the present application is in condition for allowance. If the Examiner believes that personal communication will expedite prosecution of this application, he/she is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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ATTACHMENT FOR CLAIM AMENDMENTS

The following is a marked up version of each amended claim in which underlines indicates insertions and brackets indicate deletions.

1. (Twice Amended) A liquid-crystal display apparatus, comprising:

a first substrate having:

a first substrate terminal [for conduction between substrates,]
located adjacent to a[n] first edge of [the] said first substrate, [and having]

a first electrode pattern [which is] electrically connected to said first substrate terminal [for conduction between substrates] and which is arranged so as to extend from said first substrate terminal toward a[n] second edge of said first substrate opposing [the] said first edge [to which said first terminal for conduction between substrates is adjacent]; and

a second substrate having:

a first input terminal [for input from the outside] located adjacent to a[n] first edge of [the] said second substrate,

a second substrate terminal [for conduction between substrates, which is] electrically connected to said first input terminal and which is arranged so as to extend inboard from said first input terminal along said second substrate [for input from the outside],

a second input terminal located adjacent to said first edge of said first substrate [for input from the outside] and having a first portion flanking one side of [,

flanking

located on both sides of] said first input terminal and a second portion flanking another side of said first input terminal [for input from the outside], and

a second electrode pattern, [which is] electrically connected to said second input terminal [for input from the outside], and

a sealing member having a conductive material;

[characterized in that] wherein said first substrate and said second substrate are located in an opposed manner through said sealing member so [as to extend in a direction in which] that said first electrode pattern and said second electrode pattern intersect with each other, and

said first substrate terminal [for conduction between substrates] and said second substrate terminal [for conduction between substrates] are electrically connected to each other [by] with [a] said conductive material between said first and second portions of said second input terminal [sandwiched between said first substrate and said second substrate].

2. (Amended) A liquid-crystal display apparatus according to claim 1,

[characterized in that] wherein said first substrate terminal for conduction between substrates and said second substrate terminal for conduction between substrates [are located] linearly extend toward said second edges of said first and second substrates [an edge opposing the edge to which the terminal are adjacent].

3. (Amended) A liquid-crystal display apparatus according to claim 1,

wherein [characterized in that] image data is supplied to said first electrode pattern, and a scanning signal is supplied to said second electrode pattern.

4. (Twice Amended) A liquid-crystal display apparatus, comprising:

a first substrate having:

a first substrate terminal for conduction between substrates, located adjacent to a[n] first edge of [the] said first substrate, and [having]

a first electrode pattern which is electrically connected to said first terminal [for conduction between substrates] and which is arranged so as to extend from said first substrate terminal toward a[n] second edge of said first substrate opposing [the] said first edge [to which said first terminal for conduction between substrates is adjacent]; and

a second substrate having:

a first input terminal for receiving input from an outside, located adjacent to [the] a first edge of [the] said second substrate,

a second substrate terminal for conduction between substrates extending essentially perpendicular to said first edge and disposed at a central portion of said first edge, said second substrate terminal arranged so as to extend inboard from said first input terminal along said second substrate, and

a second electrode pattern having a first portion flanking one side of said second terminal and a second portion flanking another side of said second terminal.

[the] wherein said first and second substrates are located in an opposed manner so as to extend in a direction in which said first electrode pattern and said second electrode pattern intersect with each other,

wherein [characterized by having] a driving IC is mounted on said second substrate, said driving IC having:

an input terminal being electrically connected to said first input terminal [for input from the outside], and

an output terminal being electrically connected to said second terminal for conduction between substrates and said second electrode pattern, and

wherein [characterized in that] said first substrate terminal [for conduction between substrates] and said second substrate terminal [for conduction between substrates] are electrically connected to each other by a conductive material sandwiched between said first substrate and said second substrate.

5. (Amended) A liquid-crystal display apparatus according to claim 4,

wherein [characterized in that] said first terminal for conduction between substrates and said second terminal for conduction between substrates [are located] linearly extend toward said second edges of said first and second substrates [an edge opposing the edge in which those terminals are formed].

6. (Amended) A liquid-crystal display apparatus according to claim 4,

wherein [characterized in that] image data is supplied to said first electrode pattern, and a scanning signal is supplied to said second electrode pattern.

7. (Amended) A liquid-crystal apparatus, comprising:

a first substrate;

a first substrate terminal formed on said first substrate;

a first electrode pattern formed on said first substrate and electrically connected to said first substrate terminal;

a second substrate;

an input terminal formed adjacent to an edge of said second substrate;

a second substrate terminal formed [on said second substrate] at a central portion of said edge and electrically connected to said input terminal;

[an input terminal formed on said second substrate and electrically connected to said second substrate terminal;]

a second electrode pattern formed on said [first] second substrate and electrically connected to said input terminal; and

a sealing member having a conductive material sandwiched between said first and second substrates and electrically connecting said first and second substrate terminals;

wherein said first substrate is disposed opposite said second substrate such that said first and second electrode patterns intersect.

8. The apparatus of Claim 7 wherein said first substrate terminal is disposed adjacent a first edge of said first substrate.

9. The apparatus of Claim 8 wherein said first electrode pattern extends toward a second edge of said first substrate which is opposite said first edge.

10. The apparatus of Claim 8 wherein said first substrate terminal and said second substrate terminal linearly extend away from said first edge of said first substrate.

11. The apparatus of Claim 7 wherein said input terminal further comprises:
a first input terminal formed on said second substrate; and
a second input terminal formed on said second substrate outboard of said first input terminal.

12. The apparatus of Claim 11 wherein said second electrode pattern is electrically connected to said second input terminal.

13. The apparatus of Claim 11 wherein said first input terminal is disposed adjacent an edge of said second substrate.

14. The apparatus of Claim 7 wherein said first substrate terminal is disposed adjacent an edge of said first substrate.

15. The apparatus of Claim 7 wherein image data is supplied to said first electrode pattern and a scanning signal is supplied to said second electrode pattern.

16. The apparatus of Claim 7 further comprising a driving integrated circuit mounted on said second substrate.